Combination Claims Employing Terms "Means," "Mechanism," etc., Followed by a Statement of Function with Relation to the Statute.

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It is not surprising that different views exist and that the practice of the Office has, to say the least, been vacillating with respect to the proper method of dealing with claims for combinations of mechanical elements which define the real invention by such broad and generic terms as "means" and "mechanism" followed by a statement of function. This lack of uniformity in the Office is apparently due to the same lack of uniformity in the courts in dealing with and discussing this type of claims.

It has been contended that this character of claims should not be allowed for the reason that they are vague, ambiguous, and indefinite. Further than this, it has been urged that they do not cover any particular or definite construction, but, when fairly construed, are merely claims for a function. Again, it is held that such claims are broader than the invention, and that they seek to cover any and all means that may hereafter be devised for effecting the stated result or function. This, it is contended, would close the field of invention, in the particular art, to future inventors, and tend to obstruct the progress of the useful arts, rather than to aid the progress thereof. On the other hand, it is held that this type of claims should be allowed, in the absence of any reference which does not respond to the combina-

tion both as to structure and function. This view is held by those who consider that the courts will give to an inventor, no matter what the breadth of terms used in the claim, only what he has invented and produced, and substantially its equivalents, and if the invention is of a primary or pioneer character, greater liberality will be exercised in the inclusion of equivalents.

The first view, above mentioned, as to this character of claims will now be briefly considered in the light of the statute and various court decisions.

Section 4888, R. S., requires that before any inventor or discoverer shall receive a patent for his invention he shall make application therefor, in writing to the Commissioner of Patents, and—

> "he shall particularly point out and distinctly claim the . . . combination which he claims as his invention or discovery."

Do the class of claims now under consideration meet the requirements of the statute above mentioned, or are they vague and indefinite; and fail to cover any definite construction, but seek to cover any and all means for effecting the stated result or function—or do they merely cover a function?

It is thought that the decision of the United States Supreme Court, in the case of Morley Sewing Machine Co. et al. *vs.* Lancaster (C. D., 1889, page 380) will throw considerable light on this subject. The first and thirteenth claims are the only ones that need be quoted since they are a fair type of the four claims relied upon by the plaintiffs:

> "(1) The combination in a machine for sewing shank buttons to fabrics, of button-feeding mechanism, appliances for passing a thread through the eye of the buttons and locking the loop to the fabric, and feeding mechanism substantially as set forth.
>
> "(13) The combination, with button sewing appliances, of a trough, appliances for carrying the buttons successively from the trough to the sewing devices, and mechanisms for operating said appliances and sewing devices as set forth."

In each of the above-quoted claims, it will be found that not a single element, or group of elements, that enter into the combinations, has been structurally defined. On the contrary, each element, or group of elements, is qualified solely by the function performed.

The court, in discussing this case, stated that—

> "Morley, having been the first person who succeeded in producing an automatic machine for sewing buttons of the kind in question upon fabrics, is entitled to a liberal construction of the claims of his patent. He was not a mere improver upon a prior machine which was capable of accomplishing the same result; in which case, his claims would properly receive a narrower interpretation. This principle is well settled in the patent law, both in this country and in England. Where an invention is one of a primary character, and the mechanical functions performed by the machine are, as a whole entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine."

It will be noted that in this decision there was not a dissenting opinion by any member of the court. There was not the faintest hint by the honorable court that the claims sued on were not in proper form. Here was one of the clearest examples of combination claims, wherein the elements or groups of elements, entering into the combinations, were each *solely* qualified by the function or result performed. Not a single structural limitation can be found in the above-quoted claims. If these claims were broader than the invention; vague, ambiguous or indefinite; for a function only; or for any and all means radically differing in structure and operation that in the future might be invented for effecting the stated results, will any one seriously contend that the Supreme Court would, for a moment, hesitate to criticise and put their stamp of disapproval on such a type of claim. The

fact that these claims were approved, in their broadest aspect, consistent with the disclosure in the specification, goes to show that, in form, they responded to the requirements of the statute and met with the approval of the court.

One of the first decisions of the Commissioner of Patents bearing on claims of the character now under consideration was the decision of Commissioner Butterworth in *ex parte* Demming, C. D., 1884, page 18. The first and third claims were before the commissioner for consideration. The first claim is all that need be quoted:

> "The combination substantially as set forth, of a lock, a bolt, tumbler or tumblers, a dog or dogs for locking one or more of the tumblers in an abnormal position when it has moved past the proper point to permit the movement of the bolt, and means for acting directly on the dog or dogs with the key to restore the lock to its normal position."

In discussing this claim the commissioner said that the only words that distinguished the claim from the prior art were the words—

> "and means for acting directly on the dog or dogs with the key to restore the lock to its normal position,"

and if this claim was construed literally it would embrace all constructions or arrangements whereby a certain desired result could be attained. It was further stated that such a claim would cover—

> "not only variations, equivalents and modifications of the invention described, but also means substantially different therefrom if such should in the future be invented."

This literal construction placed on the claim by the commissioner does not agree or conform with the interpretation or construction of claims by the courts for the past quarter of a century.

While this decision was intended to make the practice

of the Office uniform, the actual result was, that by reason of a misunderstanding or misapplication of the doctrine laid down therein, the practice became greatly confused. Some examiners construed this decision as prohibiting the use of the words "means, mechanism," etc., in any claim. This decision was followed by several others, involving the same question. *Ex parte* Holt, C. D., 1884, p. 43; *ex parte* Wilkins, C. D., 1884, p. 71, and *ex parte* Paige, C. D., 1887, p. 71. Commissioner Hall, in the Paige decision, above cited, made it very clear that the words "means" and "mechanism" may be properly employed where they refer to mere adjunctive devices readily understood. In instances, however, where such words were used to designate in the claims that portion of the subject-matter in which the actual invention resided, then such claims were too vague and indefinite.

The decision of the Supreme Court in Morley *vs.* Lancaster, above noted, was rendered two years after the Paige decision.

Commissioner Mitchell, shortly after the Morley decision, in *ex parte* Pacholder (C. D., 1890, p. 55) in considering the same question as was involved in the Paige decision, saw the importance and pertinency of the Morley decision to the question then under consideration and stated as follows:

> "If the abundant use of the words 'means, mechanism, and appliances' (in Morley's claims) can invalidate them, in view of the statute which requires the applicant to particularly point out and distinctly claim the part, improvement or combination which he claims as his 'invention or discovery' it will be conceded that the claims of Morley were void for indefiniteness. But the court nowhere intimates that such is the case, and proceeds in a learned opinion to show that the Lancaster machine although differing essentially in matters of construction from the Morley machine, nevertheless employed equivalent mechanisms and appliances for accomplishing the same results, and therefore was an infringement. It is impossible to avoid the conclusion that if Morley

had been held to the doctrine that the words 'means, mechanism, and appliances' may not be used in claims, when suitably qualified, he would have been unable to hold as an infringer one who appropriated the principle of his invention disguised in an organization different from that which he showed in his patent in every other respect.

"No general rule can be laid down for governing the employment in the claims of patents of such words as those under consideration. It is the object of the law, as it is the solicitude of this Office, to protect inventors and guard their inventions. . . . In the case, however, of patents which represent the infancy of an art or the stage of its earliest practical development, this Office is equally solicitous that the inventor should be accorded a breadth of claim which is commensurate with the extent and importance of the invention which he desires and is entitled to protect. . . . Of course, in all such cases while the Office will insist upon as much definiteness in the language of the claim as the statute calls for, it will also, if it properly discharge its function as the protector of the inventor leave something to the salutary and benignant agency of construction in the courts.

"As I have already indicated, the success of the inventor Morley in holding the Lancaster machine as an infringement was due to the fact that the Patent Office while respecting the statute, did not pervert it to the ignoble use of making it deprive the inventor of the very rights which it was designed to protect and foster."

Following this decision, was the decision of ex parte Knudsen (C. D., 1895, page 29). In discussing, in this decision, the class of claims, which mention "means" and "mechanism" qualified by the function attained to the exclusion of specific structural definition, the commissioner stated that this is a class of claims—

"which cause the most trouble, as frequently it is a matter of great difficulty to decide whether

such claims are subject to objection or to rejection or to both. The difficulty, too, is often increased by the fact that a broader construction ought to be given the claim, if it covers a new departure in the art.

"The use of the above noted phraseology does not of necessity render a claim objectionable, for when the idea is clearly stated and the combination or relation of parts to produce a desired end is plainly expressed the breadth of the statement of the claim is no reason for objecting to it. It is only necessary that these expressions shall clearly distinguish what is new from what is old in the art, or from fair equivalents thereof. If they do this, the question is then, one of patentable novelty—that is to say, claims of this order are not objectionable in form, on the ground that they are too broad, but only because they are vague or indefinite. When indefinite, they should be objected to; but they can only be rejected on references when these disclose both the complete combination and the functional qualifications covered by the claim."

It is now generally conceded that the courts, in construing a claim when an element of a combination is referred to by the term "means" or "mechanism," followed by a statement of function, treat it as though it was not the intention of the patentee to cover any and all means for attaining the stated function, but only the practical means described in the specification, or the fair equivalents of such means. In discussing the question in the case of Washer Co. *vs.* Cramer (169 Fed., 629; 95 C. C. A., 157, 3d Circuit), Judge Gray said that the language of the claim should not be considered dissociated from the specification, and that—

"no invention can be practically or fairly understood or explained if such dissociation is absolutely adhered to. As we have already shown the element described in the first claim, as 'means for actuating said lever' must not be taken to be any means such as impracticable hand-power

> applied to the lever, but the efficient practical means described in the specification. Reading the claim and the specification together, the invention of the patentee was clearly such an application of mechanical power as would oscillate the tub with all the advantages afforded by the resiliency and retardation of the springs of the standard washer preserved."

In the Century Electric Co. *vs.* Westinghouse Elec. & Mfg. Co. (191 Fed., 350, 354; C. C. A., 8, 12), Judge Sanborn, in applying the rule that the court should seek to ascertain from the terms of the patent, in the light of the circumstances, what was the intention of the contract between the government and the patentee said:

> "The intention should be deduced from the entire contract, and not from any part of it. The specification, which forms a part of the same application as the claims, must be read and interpreted with them, not for the purpose of limiting or contracting, or of expanding the latter, but, for the purpose of ascertaining from the entire agreement, of which each is a part, the actual intention of the parties, and that intention when ascertained, should prevail over the dry words and inapt expressions of the contract evidenced by the patent, its specification and claims."

The doctrine laid down in the above decision of Washer Co. et al. *vs.* Cramer et al., and many other court decisions too numerous to mention, to the effect that no patented invention can be practically or fairly understood or explained if the language of the claim is entirely dissociated from the specification, and that the claims and specification should be read together, is a fair and equitable one. Further than this, Judge Shipman, C: C. A., 2d Cir. (57 Fed., 629), in the Smead Warming & Ventilating Co. *vs.* Fuller & Warren Co. et al., applied this doctrine when he said:

> "The construction to be given his patent must correspond with the extent of his invention. The actual invention, if in conformity with the

> language of the claims should control in the construction of patents. A strict construction should not be resorted to, if it becomes a limitation upon the actual invention, unless such construction is required by the claim." (Merrill *vs.* Yeomans, 94 U. S., 568; Railroad Co. *vs.* Mellon, 104 U. S., 117).

It is perfectly clear, therefore, from the above decisions, and many others well known to us, that the courts, in interpreting claims consider it their duty to read the claims in the light of the specification, in order to get a full and clear understanding of what the patentee has actually invented, and the principle and operation of the invention. In many instances, when a patentee through inadvertence or ignorance, has unnecessarily placed structural limitations on his claims, the courts have resorted to the specification in order to enable them to see if the invention was a primary one. If so, they would place a liberal construction on the range of equivalents, and thereby give the patentee an interpretation of his claim, commensurate with the invention disclosed by him.

We are all aware, of course, that it is well established and settled practice of the courts that claims for a "primary" or "pioneer" invention should be given considerable liberality of construction. It is not always a very easy matter, however, to determine what are pioneer inventions, in cases of patents such as the Morse electrical telegraph, the Howe sewing machine or the Bell telephone, no trouble would be experienced in determining their character. Many instances frequently arise, however, which require considerable thought and consideration in order to determine whether or not they should properly be classed as pioneer inventions. Take, for instance, the definition of a "pioneer" invention, as given by Mr. Justice Brown in U. S. Supreme Court decision in case of Boyden et al. *vs.* Westinghouse et al. (C. D., 1898, page 443). In speaking of the word "pioneer" as applied to inventions the court said:

> "This word, although used somewhat loosely, is commonly understood to denote a patent

> covering a function never before performed, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before."

Under the above definition, any new combination of elements, or groups of elements (whether such elements are old or new) which effect a new and useful result or function, never before performed, constitutes an invention properly coming within the range of pioneer inventions. An invention, in order to come within the class of "pioneer" inventions, certainly under the Supreme Court definition of the term above given, does not have to be extremely radical or revolutionary in its character, but if it produces a novel and desirable result or function it falls within this class of inventions.

In support of the allowance by the Office of the class of claims under consideration, attention may be called to the following decisions and brief quotations therefrom:

In the Monash Younker Co. *vs.* National Steam Specialty Co., 208 Fed., 559 C. C. A., 7th Circuit, it was held that "means" qualified by the function performed did not preempt the entire field of invention but that the patentee was entitled only to the means disclosed, or their fair equivalents.

In Arnold *vs.* Tyden, 193 F., 410, the same Circuit Court of Appeals held that: "In the Paper Bag Case, 210 U. S., 405, Sup. Court, 748, the Supreme Court held "that claims for means are valid when the specification clearly discloses the particular means or mechanism having the function indicated in the claims." Under this rule held that the claims of the Tyden patent, No. 675,577, should be sustained.

The C. C. A., 8th Circuit, 1909, in Demming Wire and Fence Co. *vs.* American Steel & Wire Co., 169 Fed., 793-799, held that the following claim which covered combinations of "means" and "mechanism" qualified

by functional statements to be not void as covering merely a function, or the function of a machine:

> "In a wire-fence machine the combination of mechanism for intermittently feeding a plurality of longitudinal strand-wires, mechanism for intermittently feeding a plurality of stay-wires simultaneously and transversely of the strand-wires, mechanism for cutting off suitable length of the stay-wires to span the space between the strand-wires, and mechanism for simultaneously coiling adjacent ends of the lengths of the stay-wires around the strand-wires."

The U. S. Supreme Court, 1909, Leeds & Catlin Co. *vs.* Victor Talking Mach. Co., and U. S. Gramophone Co., 144, O. G., 1089, held that a claim for a sound-producing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same is not for the function of the machine, but sets forth a valid combination.

It must be admitted that the courts not only consider it their right, but their duty, irrespective of the form of the claim before them, to resort to the specification in order to find out the real invention, in interpreting and construing a claim of a patent. This course they pursue whether the claim is expressed in broad or limited terms, in order to determine whether the invention is of a primary or pioneer character or merely a limited improvement on the prior art, so that the range of equivalents may be broadened or limited in accordance with the chracter of the invention disclosed. In view of the above facts, therefore, what valid objection can be urged against the allowance by the Office, of claims for a combination of mechanical devices, which effect a desirable result, never heretofore attained, when the devices or elements of the combinations are included in the claims by the generic and all-inclusive terms as "means" or "mechanism" qualified by a statement of function performed? The objections herein above men-

tioned that such claims do not respond to the requirements of section 4888, R. S., and that they are for a "function" and that they are "vague and indefinite" and "broader than the invention" have, it is thought, been disposed of by the decisions of the U. S. Supreme Court and various Circuit Courts of Appeal, herein called to attention. There was another objection to claims of this character that has been urged by the Office, and that was to the effect that the construction covered by a claim should be set forth in such a clear, concise, and exact manner, that the court would not have to be compelled to resort to the specification in order to find out what was the exact invention intended to be covered. This objection, however, is without weight, since the courts have asserted their right and duty to consider the specification in connection with the claim, not to save the claim, faulty in character by reason of its broad and generic terms, or to remove therefrom its apparent structural limitations, but solely for the purpose of discovering the principle and operation of the invention, so that they could then determine the proper range of equivalents to be given to the construction covered by the claim.

We all know how very difficult it is, in view of the limitations of language to place structural limitations on the mechanical elements of a combination that happen to be selected to carry out the principles and operations of a pioneer invention. In doing this how often a meritorious inventor is needlessly deprived of the full measure of his invention. A structural limitation, at the time of drawing the claim, may appear to be broadly expressed, and essential to the carrying out of the principle and operation of the discovery or invention. At a subsequent time, when greater light is thrown on the subject, this limitation may clearly appear to be an unnecessary one. In the absence of any reference showing a combination of elements effecting the new and desirable function, stated in a claim, why should not the broad and all-inclusive terms "means" and "mechanism" followed by a statement of function be permitted?

In view of the decisions of the U. S. Supreme Court as well as the majority of the Courts of Appeal of the different circuits herein mentioned, would any one

(other than a defendant to a suit brought on a claim of the type under consideration, for a broad invention) urge that the claim was for a "function" or for *any* means that might in the future be invented no matter how radically different they might be from the specific means disclosed.

It is thought that the weight of the decisions of the courts, in recent years, tend to support the view above maintained that in the absence of any reference showing the "means" as well as the function, stated in the claim, a patentee will be given and is entitled to protection, only for that which he has invented and produced and the substantial equivalent thereof no matter what the breadth of the terms employed in the claim.

It might be urged upon a cursory reading of the decision in the Davis Sewing Machine Co. *vs.* New Departure Mfg. Co. (C. C. A., 6th Circuit, 217 Fed., 775) rendered by Judge Dennison, who was so kind as to address us here two years ago, that an inventor should be permitted to employ the terms "means" and "mechanism" qualified by function, only when such terms are intended to include elements or parts already well known in the art and designed to cooperate with some new element or parts in order to make a completely operative combination. Such terms, however, qualified as stated, should not be used to include the *real point or gist* of the invention. Upon a careful consideration of this decision in the light of the other court decisions discussed therein, it will be found that the doctrine laid down therein does not differ from that found in the Supreme Court decisions of Westinghouse *vs.* Boyden; Morley *vs.* Lancaster and Paper Bag case (C. D., 1908, page 594). This doctrine, briefly stated, is in effect that when an inventor is merely an improver in an art, and has produced a construction or combination intended to effect some result in a better or more perfect way than it had heretofore been performed, and in order to do this he has produced a specific construction, then the real invention resides in the specific construction and the claim should be couched in such definite and exact terms, as to *structurally* differentiate the invention from inventions of the prior art, designed for effecting the same result or func-

tion. Even in claims for a mere improvement in the prior art, the doctrine of equivalents may be invoked, but, in such instances, the range of equivalents is greatly limited, as compared with a claim for a new combination of mechanical elements, which perform a desirable and useful result never before effected by mechanical means.

It is contended that under the doctrine of construction of claims as laid down by the courts, it is first necessary to ascertain from the description and claim what was the real purpose and intent of the inventor. If the purpose was to accomplish a desirable result or function never before attained by mechanical means, and, in order to do so, he selects a plurality of old or new elements, or groups of elements and cooperatively combines them and thereby effects this result, then the invention falls within the range of "pioneer" inventions. In such a case these new or old "elements," or groups of elements, may be included in a claim by the broad and all-inclusive terms of "means" or "mechanism" properly qualified by a statement of result or function performed. On the other hand, however, if on reading the specification and claim we find that the inventor merely proposes to perform in a simpler and probably more perfect way, some useful and desirable function, heretofore attained by mechanical means, then the inventor should be classed as a mere improver in the art, and his claims should not be permitted to define his specific construction, or *actual* invention by such broad terms as those under consideration, but the terms employed should bring out structural limitations in order to differentiate the construction claimed from the constructions of the prior art.

If an inventor has succeeded in producing a novel machine by cooperatively combining, say, for example, three old elements, or groups of elements, and the mechanical function performed, as a whole, is entirely new, then it is thought no one at this time will question the propriety of these elements or groups of elements being included in a claim by the broad terms of "means" and "mechanism" qualified by function. On the other hand, if before making this new combination of old devices, the inventor desires to go a step further, and

effect, not only the first mentioned new result or function, but an additional new function, and he discovers that by a slight modification in the construction of one or more of the old elements he will effect this *plurality* of new results (as was the case in the Morley machine) will any one contend that he would not be entitled to as much latitude in expression, in protecting his invention or discovery, as he would have been if he had not displayed such a high degree of invention? To hold otherwise would be tantamount to the contention that one who has shown a very high degree of originality should be more limited and restricted in the use of the terms employed in protecting his invention, than one who has disclosed an invention in lesser degree.

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